

Appendix A: Troubleshooting

Diagnosing Hub Indicators

The dual-speed CheetahHub can be easily monitored through its front panel indicators. These indicators assist the network manager in identifying problems the hub may encounter. This section describes common problems you may encounter and possible solutions.

Symptom: Power indicator does not light up.

Cause: Defective power supply or Power LED.

Solution: Have your unit's power supply or Power LED replaced. Ask for dealer assistance.

Symptom: Partition indicator is flashing.

Cause: Hub has partitioned a port.

Solution: If port partitioning has occurred, the hub will automatically enable the port when the faulty condition disappears.

Symptom: Link indicator remains unlit.

Cause: Workstation's network adapter, cable or hub port is defective.

Solution: The most common cause is a defective network adapter or cable connection. Check the corresponding cable connections, or the workstation's network adapter for possible defects. Verify that the correct cable type is being used. Replace the defective cable or adapter. (Use 100Ω STP or UTP cable for RJ-45 connections and multimode cable for fiber optic connections.)

Use the diagnostic procedures described in Chapter 2 and the following section to verify that all other system components are functioning properly. If you still cannot resolve the problem, contact your Accton distributor for assistance.

System Diagnostics

Installation

Verify that all system components have been properly installed. If one or more components appear to be malfunctioning, test them in an alternate environment where you are sure that all the other components are functioning properly.

Cabling

1. Verify that the cabling type is correct. Be sure all cable connectors are securely seated in the required ports. Straight-through cable should be used for all standard twisted-pair connections; and multimode cable with SC or ST type connectors should be used for fiber optic connections.
2. Make sure all devices are connected to the network. Equipment may have been unintentionally disconnected from the network.

External Adapters

Make sure the network adapter cards installed in the workstations are compatible with your network media type and are in good working condition.

Configuration

If problems occur after altering the network configuration, restore the original connections, then try to track the problem down by implementing the new changes, one step at a time. Ensure that cable distances and other physical aspects of the installation do not exceed recommendations.

System Integrity

As a last resort verify the hub's integrity with a power-on reset. Turn the power to the hub off and then on a few times. If the problem still persists and you have completed all the preceding diagnoses, contact your Accton distributor for further assistance. (Refer to Appendix E.)

Appendix B: Port and Cable Assignments

RJ-45 Port

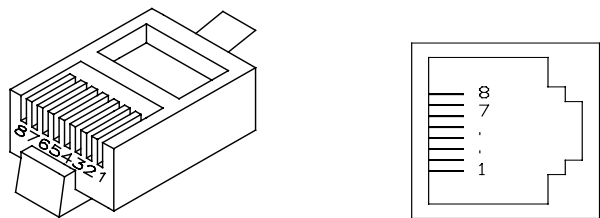
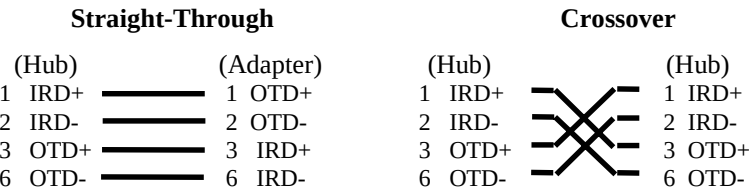


Figure B-1 RJ-45 Connector (on the Hub Side)

Pin	MDI-X Assignment (Station Ports)	MDI Assignment (Cascade Port)
1	Input Receive Data +	Output Transmit Data +
2	Input Receive Data -	Output Transmit Data -
3	Output Transmit Data +	Input Receive Data +
6	Output Transmit Data -	Input Receive Data -
4,5,7,8	Not Used	Not Used

Table B-1 RJ-45 Pin Assignments

Schematics for both straight and crossover twisted-pair cable are shown below.



MII Port

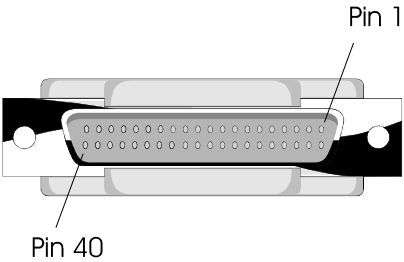


Figure B-2 MII Connector

Pin	Signal Name	Pin	Signal Name
1	+5V	21	+5V
2	MDIO	22	COMMON
3	MDC	23	COMMON
4	RXD<3>	24	COMMON
5	RXD<2>	25	COMMON
6	RXD<1>	26	COMMON
7	RXD<0>	27	COMMON
8	RX_DV	28	COMMON
9	RX_CLK	29	COMMON
10	RX_ER	30	COMMON
11	TX_ER	31	COMMON
12	TX_CLK	32	COMMON
13	TX_EN	33	COMMON
14	TXD<0>	34	COMMON
15	TXD<1>	35	COMMON
16	TXD<2>	36	COMMON
17	TXD<3>	37	COMMON
18	COL	38	COMMON
19	CRS	39	COMMON
20	+5V	40	+5V

Table B-2 MII Pin Assignments

Appendix C: Product Specifications

Repeater Criteria

Transmission Technique	Baseband								
Topology	Star or Tree								
Access Method	CSMA/CD, 10 Mbps or 100 Mbps								
Standards Conformance	IEEE 802.3 10BASE-T Repeater, IEEE 802.3u 100BASE-TX Repeater								
Media Supported	<table border="1"> <thead> <tr> <th>RJ-45</th><th>MII transceiver</th></tr> </thead> <tbody> <tr> <td>10BASE-T</td><td>100BASE-TX</td></tr> <tr> <td>100BASE-TX</td><td>100BASE-T4</td></tr> <tr> <td></td><td>100BASE-FX</td></tr> </tbody> </table> 10BASE-T: 100Ω Category 3, 4 or 5 UTP/STP (2-pair wire), 100BASE-TX: 100Ω Category 5 UTP/STP (2-pair wire), 100BASE-T4: 100Ω Category 3, 4 or 5 UTP/STP (4-pair wire), 100BASE-FX: 50/125 or 62.5/125 μm multimode fiber (see specs. for transceiver) 12 RJ-45 MDI-X station ports (Port 1 supports MDI-X or MDI connection), 1 100 Mbps MII port	RJ-45	MII transceiver	10BASE-T	100BASE-TX	100BASE-TX	100BASE-T4		100BASE-FX
RJ-45	MII transceiver								
10BASE-T	100BASE-TX								
100BASE-TX	100BASE-T4								
	100BASE-FX								
Interfaces	483 mm x 310 mm x 66.3 mm (19.0"x 12.2" x 2.6")								
Dimensions									
Power System									
Input Power	100~120 VAC ($\pm$ 10%), 3 Amp max.; 200~240 VAC ($\pm$ 10%), 50~60 Hz $\pm$ 3Hz								
Power Consumption	2 Amp max.								
Fuse	5A/250V								
Temperature	0 to 40°C / 32 to 104°F (Standard Operating)								
Humidity	5% to 95% (Noncondensing)								
Certification	CE Mark								
Emissions	FCC Class B, VCCI Class B, CISPR Class B								
Immunity	IEC 1000-4-2/3/4/6								
Safety	UL, CSA, TÜV/GS								

Network Criteria¹

Hub-to-Workstation Distance	100 meters maximum using twisted-pair cable
Inter-hub Distance	2 dual-speed hubs: 5 meters using twisted-pair cable, 1 dual-speed to 1 10 Mbps hub: 100 meters using twisted-pair cable (assumes 100 meters of twisted-pair cable is used to attach each node to hub)
Total Network Span	
Single Hub	200 meters of twisted-pair cable (100 meters to each attached node) 260 meters of mixed twisted-pair and fiber-optic cable (100 meters for twisted-pair and 160 meters for fiber)
Two-hub Chain	205 meters of twisted-pair cable (100 meters to each attached node, and 5 meters between hubs)

1 - 5 meters = 16 feet, 100 meters = 328 feet, 205 meters = 672 feet, 260 meters = 853 feet

Internal Switching Criteria

Network Bridging Function	filtering, forwarding and learning
Switching Method	store-and-forward
Address Table	4K entries
Queue Buffer	10 Mbps bridging port: 256 Kbytes 100 Mbps bridging port: 256 Kbytes

Appendix D: Regulatory Standards Compliance

EMI Warning

FCC Class B Certification

Accton Technology Corporation

Model Numbers: *EH3012B-TX*

FCC ID: *HED3012EHB*

This device complies with Part 15 of the FCC Rules. Operation is subject to the following conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

Warning! This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from the one which the receiver is connected to
- Consult the dealer or an experienced radio/TV technician for help

You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

CheetaHub Power-3012B User's Guide

You may use unshielded or shielded twisted-pair (UTP or STP) for RJ-45 connections.

- Warnings**
1. Wear an anti-static wrist strap or take other suitable measures to prevent electrostatic discharge whenever handling this equipment.
 2. When connecting this hub to a power outlet, connect the field ground lead on the tri-pole power plug to a valid earth ground line to prevent electrical hazards.

You may find the following booklet prepared by the Federal Communications Commission helpful:

The Interference Handbook

This booklet is available from the U.S. Government Printing Office. Washington, D.C. 20402. Stock No. 004-000-00345-4.

Note: In order to maintain compliance with the limits of a Class B digital device, Accton requires that you use a quality interface cable when connecting to this device. Changes or modifications not expressly approved by Accton could void the user's authority to operate this equipment. Suggested cable type is:

- 2-pair 100 Ω STP/UTP for RJ-45 connections: 100BASE-TX, 10BASE-T
- 4-pair 100 Ω STP/UTP for RJ-45 connections: 100BASE-T4
- Optical cable for fiber-optic connections: 100BASE-FX

Voluntary Control Council for Interference (VCCI-B)

この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づくクラスB情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。

取扱説明書に従って正しい取り扱いをして下さい。

This product also complies with CISPR22 Class B (EN55022 Class B).

EN55022 Declaration of Conformance

This is to certify that the Accton Ethernet Hub is shielded against the generation of radio interference in accordance with the application of Council Directive 89/336/EEC, Article 4a. Conformity is declared by the application of EN55022:1987 Class B (CISPR 22:1985/BS 6527:1988).

CE Mark Declaration of Conformance

This is to certify that this product complies with ISO/IEC Guide 22 and EN45014. It conforms to the following specifications:

EMC:	EN55022(1988)/CISPR-22(1985)	class B
	EN60555-2(1995)	class D
	EN60555-3	
	IEC 1000-4-2(1995)	4kV CD, 8kV AD
	IEC 1000-4-3(1995)	3V/m
	IEC 1000-4-4(1995)	1kV - (power line)
		0.5kV - (signal line)
	IEC 1000-4-6(1995)	3Vmrs

This product complies with the requirements of the Low Voltage Directive 73/23/EEC and the EMC Directive 89/336/EEC.

Do not plug a phone jack connector into any of the RJ-45 ports.
This may damage the hub.

Les raccordeurs ne sont pas utilisé pour le système téléphonique!

Safety Compliance

Underwriters Laboratories Compliance Statement

Important! Before making connections, make sure you have the correct Cord Set. Check it (read the label on the cable) against the following specification list.

Operating Voltage	Cord Set Specifications
120 Volts	UL Listed/CSA Certified Cord Set
	Minimum 18 AWG
	Type SVT or SJT three conductor cord
	Maximum length of 15 feet
	Parallel blade, grounding type attachment plug rated 15A, 125V
240 Volts (For North America)	UL Listed/CSA Certified Cord Set
	Minimum 18 AWG
	Type SVT or SJT three conductor cord
	Maximum length of 15 feet
	Tandem blade, grounding type attachment plug rated 15A, 125V
240 Volts (For Europe only)	Cord Set with H05VV-F cord having three conductors with minimum diameter of 0.75 mm ²
	IEC-320 receptacle
	Male plug rated 6A, 250V

The unit automatically matches the connected input voltage. Therefore, no additional adjustments are necessary when connecting it to any input voltage within the range marked on the rear panel.

Wichtige Sicherheitshinweise

1. Bitte lesen Sie diese Hinweise sorgfältig durch.
2. Heben Sie diese Anleitung für den späteren Gebrauch auf.
3. Vor jedem Reinigen ist das Gerät vom Stromnetz zu trennen.
Verwenden Sie keine Flüssig- oder Aerosolreiniger. Am besten eignet sich ein angefeuchtetes Tuch zur Reinigung.
4. Die Netzanschlußsteckdose soll nahe dem Gerät angebracht und leicht zugänglich sein.
5. Das Gerät ist vor Feuchtigkeit zu schützen.
6. Bei der Aufstellung des Gerätes ist auf sicheren Stand zu achten. Ein Kippen oder Fallen könnte Beschädigungen hervorrufen.
7. Die Belüftungsöffnungen dienen der Luftzirkulation, die das Gerät vor Überhitzung schützt. Sorgen Sie dafür, daß diese Öffnungen nicht abgedeckt werden.
8. Beachten Sie beim Anschluß an das Stromnetz die Anschlußwerte.
9. Verlegen Sie die Netzanschlußleitung so, daß niemand darüber fallen kann. Es sollte auch nichts auf der Leitung abgestellt werden.
10. Alle Hinweise und Warnungen, die sich am Gerät befinden, sind zu beachten.
11. Wird das Gerät über einen längeren Zeitraum nicht benutzt, sollten Sie es vom Stromnetz trennen. Somit wird im Falle einer Überspannung eine Beschädigung vermieden.
12. Durch die Lüftungsöffnungen dürfen niemals Gegenstände oder Flüssigkeiten in das Gerät gelangen. Dies könnte einen Brand bzw. elektrischen Schlag auslösen.
13. Öffnen sie niemals das Gerät. Das Gerät darf aus Gründen der elektrischen Sicherheit nur von autorisiertem Servicepersonal geöffnet werden.
14. Wenn folgende Situationen auftreten ist das Gerät vom Stromnetz zu trennen und von einer qualifizierten Servicestelle zu überprüfen:
 - a. Netzkabel oder Netzstecker sind beschädigt.
 - b. Flüssigkeit ist in das Gerät eingedrungen.
 - c. Das Gerät war Feuchtigkeit ausgesetzt.
 - d. Wenn das Gerät nicht der Bedienungsanleitung entsprechend funktioniert oder Sie mit Hilfe dieser Anleitung keine Verbesserung erzielen.
 - e. Das Gerät ist gefallen und/oder das Gehäuse ist beschädigt.
 - f. Wenn das Gerät deutliche Anzeichen eines Defektes aufweist.

Der arbeitsplatzbezogene Schalldruckpegel nach DIN 45 635 Teil 1000 beträgt 70dB(A) oder weniger.

Appendix E: Product Support Services

Product Registration

Fill in the Owner Registration Card and mail it to Accton Technology Corporation. Accton will keep your record and inform you of any new Accton unit developments.

Problem Report

If problems occur during unit operation, please check the adapter configuration settings, cables, connectors, network terminators, hardware compatibility and other network components.

Write a description of the problem, including what problems occurred, when they occurred, duration of the problems, the unit number, serial number, hardware, software and the DOS version that you are using. Then contact your dealer or Accton Technology Corporation for assistance.

Hardware Repair Service

You must get an RMA (Return Materials Authorization) number before returning any hardware for repair. To obtain this number please inform Accton of your company name, address, unit name and model number, contact person, telephone number, and a problem description list. If your unit is under repair warranty you must also give your purchase date. Carefully pack your hardware. If possible, use the original carton. Mark the RMA number on the carton and send it to your dealer.

After repair, Accton will inform you of the date of delivery and the exact amount due. Please send the payment by T/T (Telegram Transfer), and Accton will send you the fixed component after receiving payment. With or without warranty, if the hardware is found to be free of defects, you will only be charged for testing and handling.

Bulletin Board Service (BBS)

- In countries other than the U.S., call 886-3-5770-654 to reach Accton Taiwan's modem line. Modems with 14400 through 2400 baud are supported. Choose 8 data bits, 1 stop bit and no parity. Standard VT100 terminal emulation is supported
- In the United States, call 408-452-8828 to reach the Accton USA's BBS line. Modems with 14400 through 2400 baud are supported. Choose 8 data bits, 1 stop bit and none parity. Standard VT100 terminal emulation is supported.

Interactive Fast Fax (U.S.A. Office)

Printed technical documentation can be faxed to your fax machine, 24-hours a day.

- Call 408-452-8811 to reach Accton's interactive Fast FAX service. You will need a Touch-Tone phone and a fax machine (or equivalent). Choose document 911 for a listing of technical bulletins.

Technical Support

Your dealer or installer is the person who understands your network and Accton units. If neither is available to help you, Accton technical support engineers are available by fax, mail or phone.

- Send your technical questions by fax to:
International Headquarters: 886-3-5770-267
USA Headquarters: 408-452-8988
- To obtain software upgrades connect via ftp to ftp.accton.com.tw
- Send your technical questions by email to support@accton.com.tw
- Mail your technical questions to:

International Headquarters Accton Technology Corporation Attn: Technical Support No. 1 Creation Road III Science-based Industrial Park Hsinchu 300, Taiwan, R.O.C.	USA Headquarters Accton Technology Corporation Attn: Technical Support 1962 Zanker Road, San Jose, CA 95112, U.S.A.
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During local business hours, call:

International Headquarters (Monday through Friday, 8 am to 6 p.m.): 886-3-5770-270	USA Headquarters (Monday through Friday, 7 am to 5 p.m. Pacific Time): 408-452-8900 or 800-926-9288
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Limited Warranty

Accton warrants to the original owner that the product delivered in this package will be free from defects in material and workmanship for the lifetime of the product. For the warranty to apply, you must register your purchase by returning the registration card indicating the date of purchase and including proof of purchase. There will be a minimal charge to replace consumable components, such as fuses, power transformers, and mechanical cooling devices. The warranty does not cover the product if it is damaged in the process of being installed. Accton recommends that you have the company from whom you purchased this product install it.

THE ABOVE WARRANTY IS IN LIEU OF ANY OTHER WARRANTY, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING BUT NOT LIMITED TO ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ANY WARRANTY ARISING OUT OF ANY PROPOSAL, SPECIFICATION OR SAMPLE. ACCTON SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. ACCTON NEITHER ASSUMES NOR AUTHORIZES ANY PERSON TO ASSUME FOR IT ANY OTHER LIABILITY.

Customer Remedies

If the product is found to be defective within the first two years from the later of date of purchase or date of manufacture, Accton's entire liability and your exclusive remedy for any breach of warranty, shall be, at its option, to repair or replace the product at no charge except as set forth below. If the product is found to be defective after two years from the later of date of purchase or date of manufacture, Accton will charge a process and handling fee, provided that you deliver the product along with a return material authorization (RMA) number either to the company from whom you purchased it or to Accton. Accton warrants the repaired or replaced product to be free from defects in material and workmanship for the remainder of the original product's warranty period. Consumable components are warranted only for two years.

Return Process

Before you may return any Accton product to Accton, you must request an RMA number by calling, faxing or writing Accton's Service Department at the address listed below. If you ship the product, you must assume the risk of damage or loss in transit. You must use the original container (or the equivalent) and pay the shipping charge. Accton may replace or repair the product with either a new or reconditioned product, and the returned product becomes Accton's property. At Accton's sole discretion, Accton will issue a credit for either a comparable replacement Accton product or credit the original purchase price towards the purchase of any Accton product for any unrepairable, defective product.

This warranty does not cover replacement of products damaged by abuse, accident, misuse, neglect, alteration, repair, disaster, improper installation or improper testing.

ACCTON SHALL NOT BE HELD LIABLE FOR ANY LOSS OF PROFITS, LOSS OF USE, INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES CAUSED BY THE USE OF THIS PRODUCT OR INABILITY TO USE IT, EVEN IF THE COMPANY OR ACCTON HAS BEEN ADVISED OF SUCH LIABILITY OR OTHER SPECIAL CLAIMS.

If you purchased this product in the USA, be aware that some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights and you may have other rights which vary from state to state. All parts or components contained in this product are covered by Accton's Limited Lifetime Warranty for this product. The product may contain fully tested, recycled parts, warranted as if new.

For warranty information:

All territories except North and South America:

Accton Technology Corporation, International Headquarters
No. 1, Creation Rd. III, Science-based Industrial Park, Hsinchu 300, Taiwan, R.O.C.
Phone: 886-3-5770-270 Fax: 886-3-5770-267 BBS: 886-3-5770-654

North and South America:

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Taipei: Phone: 886-2-577-1220 to 9
Fax: 886-2-577-0816

Accton USA,
1962 Zanker Road,
San Jose, CA 95112, USA
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Fax: 408-452-8988
BBS: 408-452-8828
FAST FAX: 408-452-8811

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Staines. Middx. TW196BJ United Kingdom
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Fax: 44-1753-689010

Accton Australia,
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Chatswood, NSW 2067, Australia
Phone: 612-9410-9860
Fax: 612-9410-9861

Accton Japan,
Yokohama Landmark Tower 17F,
2-1-1, Minatomirai 2-Chome,
Nishi-Ku, Yokohama,
220-81, Japan
Phone: 81-45-224-2332
Fax: 81-45-224-2331

Ordering Information

- **CheetaHub Power-3012B**
(Model No. ES3012B)
- **CheetaHub Power-3024B**
(Model No. ES3024B)

Dual-Speed Ethernet Hub with
12 RJ-45 ports for 100BASE-TX or 10BASE-T
media connection, and 1 100 Mbps MII port

Dual-Speed Ethernet Hub with
24 RJ-45 ports for 100BASE-TX or 10BASE-T
media connection, and 1 100 Mbps MII port

Glossary

10BASE-T

IEEE's specifications for 10 Mbps Ethernet using 2-pair Category 3, 4 or 5 twisted-pair cable (100 Ω STP or UTP). The maximum length of cable for a point-to-point connection is 100 meters (328 feet).

100BASE-TX

IEEE's specifications for 100 Mbps Ethernet using 2-pair Category 5 twisted-pair cable (100 Ω STP or UTP). The maximum length of cable for a point-to-point connection is 100 meters (328 feet).

100BASE-T4

IEEE's specifications for 100 Mbps Ethernet using 4-pair Category 5 twisted-pair cable (100 Ω STP or UTP). The maximum length of cable for a point-to-point connection is 100 meters (328 feet).

100BASE-FX

IEEE's specifications for 100 Mbps Ethernet using multimode fiber optic cable. The maximum cable length for point-to-point connection is 160 meters (525 feet) for this hub.

Bus Topology

A network topology where only one path exists between any two nodes, and data transmitted by any node is concurrently available to all other nodes on the same transmission medium.

Category 3, 4, 5 Twisted-Pair Cable

100 Ω and 120 Ω balanced cable and connecting hardware with transmission characteristics rated up to 16 MHz for Category 3, 20 MHz for Category 4, and 100 MHz for Category 5. These specifications apply to 10BASE-T and 100BASE-T4 cabling.

Collision

A condition in which two packets transmitted over a medium interfere with each other. This interference makes both unintelligible.

Configuration

The way to set up a computer, server, or local area network.

Connection

A logical binding between two or more users of an interconnection service.

Daisy-Chain Port

An MDI RJ-45 port used to cascade compatible devices in a daisy-chain configuration using straight-through twisted-pair cable. To cascade to another device, you may either use the daisy-chain port, or cascade the two devices by running crossover cable between MDI-X station ports on both devices.

Ethernet

A network communication system developed and standardized by DEC, Intel, and Xerox, using baseband transmission, CSMA/CD access and logical bus topology, and coaxial cable. The successor IEEE 802.3 standard provides for integration into the OSI model and extends the physical layer and media with repeaters and implementations that operate on fiber optics, baseband, and twisted-pair.

Fiber Optic Cable

Communications cable with a glass filament in the center, covered with several layers of sheathing for strength and insulation. Signals are transmitted along the glass filament in the form of light pulses.

IEEE 802.3 Standard

Standard for the physical and electrical connections in local area networks developed by the IEEE. The IEEE 802.3u standard covers these same issues for 100 Mbps networks.

LED

Light emitting diode on the front panel of the hub used for monitoring a hub or network condition. An LED display corresponds to a hub condition.

Local Area Network (LAN)

A group of interconnected computers and support devices.

MDI Port (Medium Dependent Interface)

MDI is the IEEE standard for the UTP interface to 10BASE-T. This RJ-45 port can be used with straight-through cable to connect the hub to a network interconnection device, such as another hub or switch. Pin-out assignments are shown in Appendix B.

MDI-X Port (Medium Dependent Interface - Crossed)

This RJ-45 port, which crosses the receive and transmit signals internally, can be used with straight-through cable to connect the hub to any network device that has a properly installed network interface card (e.g., a workstation or server). Pin-out assignments are shown in Appendix B.

MII

IEEE's specifications for a multi-media interface that supports 100BASE-TX, 100BASE-T4 or 100BASE-FX.

Partition

A port may be partitioned (i.e., isolated) by the hub if excessive collisions are detected. The port is automatically reattached to the collision domain once the problem is corrected.

Repeater

A device that regenerates incoming signals to extend the range of transmission between stations, or to interconnect network nodes or branches.

RJ-45 Connector

Most common terminator for twisted-pair wiring.

Shielded Twisted-Pair (STP)

100 Ω Category 5 twisted-pair wire covered with an external aluminum-foil or woven-copper shield designed to reduce excessive noise pick up or radiation. The STP cable referred to in this manual is also sometimes called screened twisted-pair (ScTP). Its impedance is 100 Ω and has the same pin assignment as UTP. This cable should not be confused with the older 150 Ω cable type designed by IBM.

Station Port

The MDI-X ports or the fiber optic port can be used for connecting the hub to any workstation or server that has a properly installed network adapter card.

Switch

A device that increases bandwidth by breaking the network up into several segments, and reduces latency by forwarding traffic as soon as it receives the packet header. A switch filters, forwards or broadcasts frames based on the frame's destination address.

Transceiver

A device used to convert signals passed between different media types. This device, also commonly referred to as a multi-access unit functions as both a receiver and transmitter.

Unshielded Twisted-Pair (UTP)

Cable composed of two insulated wires twisted together to reduce electrical interference; used in common telephone cord.

Index

A

address learning function, 1-3
automatic partitioning, 1-4
automatic polarity detection, 1-4

C

certification, C-1
configuring the network, 3-1
connecting multiple hubs, 3-2, 3-4
 fiber optic cable, 3-4
 RJ-45 daisy-chain port, 3-2
connecting the hub system, 2-4
crossover cable, B-1

D

diagnostic tests, 2-8
dual-speed CheetaHub system, 1-1

E

EMI warning, D-1

F

FCC warning, D-1

H

hot remove function, 2-8

I

installation
 mounting hubs in a rack · 2-3
 mounting hubs on a flat surface · 2-2
 requirements, 2-1
installing the system, 2-1
introduction to Fast Ethernet, 1-1

J

jabber lock-up, 1-4

L

limited warranty, E-4
link indicator, 2-10

M

maximum cable length
 fiber optic, 2-10
 twisted-pair, 2-10
maximum network span
 fiber optic cable, 3-4
 stand-alone hub, 3-1
MDI daisy-chain port, 3-2
media independent interface, 1-1, 1-2
MII, 1-1, 1-2
mounting hubs on a rack, 2-3

N

network connection
 MDI daisy-chain port, 2-5
 MDI-X station port, 2-4
 MII port, 2-7
 verifying, 2-10

network span, 2-6, 2-7
 fiber optic, v
 twisted-pair, iv

P

package contents, i
port and cable assignments, B-1
ports
 MII, B-2
 RJ-45, B-1
product features, 1-2
product support services, E-1
 Accton offices, E-6
 Bulletin Board Service, E-2
 hardware repair service, E-1
 interactive Fast Fax, E-2
 ordering information, E-6
 technical support, E-3
providing power to the hub, 2-8

Q

quick installation, iii

R

restrictions on cascade length, 2-6

S

safety compliance, D-3
specifications
 certification, C-1
 interfaces, C-1
 internal switch, C-2
 network, C-1
 power system, C-1
 standards conformance, C-1
stacking hubs without a rack, 2-2
stand-alone configuration, 3-1

standards compliance, D-1

T

troubleshooting
 configuration, A-2
 hub indicators, A-1
 installation, A-2
twisted-pair cable
 category 3,4,5, 2-4

V

verifying port status, 2-9
verifying system operation, 2-10



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